DOCUMENT RESUME

ED 194 705 CE 026 481

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TITLE The Problems of the Adult Learner: A Handbook for Teachers.
INSTITUTION William Rainey Harper Coll., Palatine, Ill.
SPONS AGENCY Illinois State Office of Education, Springfield. Div. of Adult Vocational and Technical Education.: Office of Education (DHEW), Washington, D.C.
PUB DATE [77]
NOTE 47p.: Not available in paper copy due to broken type.
AVAILABLE FROM Curriculum Publications Clearinghouse, Horrabin Hall, Room 46, Western Illinois University, Macomb, IL 61455 ($1.00)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Adult Basic Education: *Adult Learning: Adult Students: *Classroom Techniques: Compensatory Education: *Diagnostic Teaching: Educational Diagnosis: English (Second Language): Handicap Identification: Language Arts: *Learning Disabilities: *Learning Problems: Mathematics: Older Adults: Reading Comprehension: Teaching Methods: Young Adults

ABSTRACT

This handbook on the adult learner and adult learning problems or disabilities is designed to serve as a practical tool for the Adult Basic Education instructor. It is divided into two main sections. Section 1 contains information concerning the nature of the adult learner. The first part deals with general characteristics of the adult learner and is followed by discussions on older adult learners, younger adult learners, and English as a Second Language adult learners. Each of these four parts of section 1 includes an introduction followed by a list of implications for the instructor. Section 2 addresses specific learning problems or disabilities that adult learners may exhibit and proposes various compensatory techniques for the instructor to try. Following definition of learning disabilities and discussion of causes are included visual and auditory behavioral checklists (language arts and math) for student identification along with compensatory tactics. For each general or specific behavior teaching strategies are suggested. Reading comprehension is treated separately. Appendixes include a list of teaching materials and tests and a list of agencies rendering diagnostic and remedial services. Listings of annotated references are found at the end of section 1 and the end of the handbook. (YLB)

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THE PROBLEMS OF THE ADULT LEARNER

A HANDBOOK FOR TEACHERS

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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A special demonstration project conducted under provisions of Section 309 of the Federal Adult Education Act, P.L. 91-230 as amended, and supported by the United States Office of Education and the Illinois Office of Education, Department of Adult, Vocational and Technical Education, Adult and Continuing Education Section. The facts and opinions stated in this document are those of the project staff and do not necessarily represent those of the United States Office of Education or the Illinois Office of Education.

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INTRODUCTION

Like other adult basic education instructors, the staff members of Harper College's ABE program have felt the need for continuing professional education to increase their awareness of the special problems of the adult learners with whom they work. Two of the 1976-77 staff development programs focused on the learning problems of adult students and the strategies the instructor might use to deal with them.

While the workshops provided valuable specific insights and suggestions, it was felt that the broader frame of reference for adult learning also needed to be addressed. If the information from various sources could be synthesized in a concise, topical presentation, then future ABE staff members in many programs might benefit.

In an attempt to provide this kind of permanent resource, we proposed the development of a handbook on the adult learner and adult learning problems or disabilities to serve as a practical tool for the ABE instructor. The project was funded under Section 309 of the Federal Adult Education Act, Public Law 91-230, as amended, and the handbook was developed by two Harper ABE staff members.

The handbook is divided into two main sections. Section I focuses on the general learning problems of adults and their implications for the instructor. Section II addresses itself to the specific learning problems or disabilities that adult learners may exhibit and proposes various compensatory techniques for the instructor to try.

We are aware that a brief handbook cannot be an exhaustive resource, but we hope that by avoiding the too specialized and the too complicated we have provided ABE instructors with a useful tool to increase their effectiveness in meeting the needs of their students.

Mary Russell Curran
Coordinator, ABE/GED

We wish to acknowledge all those who contributed suggestions for and support of the development of this handbook. Special thanks to Mary Curran, Robert Smith, Patricia Best, Patricia Mulcrone, Jean Chapman, Joy Wade, Elizabeth Salse, Joe Wemette, Paul Ilsley, and Sharon Silet.

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Deborah Corey Wemette

SECTION I - LEARNING CHARACTERISTICS OF ADULTS

This portion of the handbook consists of information concerning the nature of the adult learner. The first part of this section deals with general characteristics of the adult learner and is followed by discussions on older adult learners, younger adult learners, and English as a Second Language adult learners. The remarks on older and younger adults are presented purposely without listed age limits to increase their applicability. A list of references follows the presentation on the ESL adult learner.

Each of the four parts of this section of the handbook includes an introduction and some general adult learner characteristics followed by a list of implications for the instructor.

THE ADULT LEARNER

Although there is no "typical adult learner," most authorities agree that certain general characteristics are true in varying degrees for many adults. These general characteristics of adult learners suggest implications which can be used by the instructor to guide the learning activities both for individuals and for the class. The most productive learning also depends on the instructor's awareness of every student's unique set of experiences, abilities, and expectations. The instructor's perception of his students' individual needs and personal goals will determine how many of the following general charcteristics apply, but we hope that the suggestions will increase his effectiveness with the adult learners he encounters.[1]

ADULTS NEED TO MAINTAIN DIGNITY.

- View the adult/learner instructor relationship as a partnership.
- Avoid child-oriented classroom procedures such as hand raising.
- Provide general information such as location of restrooms, break rooms, and smoking areas, so the adult does not have to ask.

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[1]In this presentation, "his"is being used as an inclusive pronoun.

- Avoid exhibiting judgmental behavior when the values and priorities of the adult learner differ from your own. If you feel that there is a need for modification of the learner's views, discuss the situation objectively and allow the learner to make the decisions.

- Do not use the learner as an audience for personal plans, experiences, and opinions.

- Do not minimize the impact of adult anxieties such as fear of returning to school and concern about the GED test.

- Deal with adult learners honestly (although tactfully).

ADULTS ARE OFTEN DOUBTFUL OF THEIR ABILITY TO LEARN.

- Be alert for occasions when positive reinforcement can be provided. Remember, however, that over-praising damages your credibility as an instructor and reduces the effectiveness of positive comments.

- Avoid situations in which learners are compared.

- Deal with academic and personal problems of the learner in private.

- Encourage socialization through informal group disdussions and breaks so that the student realizes that his feelings are not unique.

- Help the learner to define clearly his personal goals and then provide measurable and understandable evaluation as to his progress toward them.

- Be alert for insecurity masked by an air of over-confidence.

- Try to alleviate the GED test anxiety.

    - Provide the learner with as much pre-test information as possible.

    - Offer GED test-taking practice.

    - Arrange for successful GED test-takers to speak with the learner.

    - Make no attempt to minimize the importance or difficulty of the test.

    - Work with testing center officials to insure the best possible testing situation.

ADULT LEARNERS ARE STRONGLY GOAL-ORIENTED.

- Make the learner as responsible for his own learning as possible by eliciting learner input in such areas as goal setting, curriculum content, process planning, and evaluation.

- Provide for differences in goals of adult learners.

- Introduce new activities by relating them to previously set goals.

- Provide for non-threatening forms of learner-administered evaluation such as self-correcting exercises and homework.

- Provide instructor feedback to each learner as often as possible.

- Avoid "busywork" exercises.

ADULT LEARNERS HAVE MANY EXPERIENCES UPON WHICH TO DRAW.

a. Some of these are positive experiences which can facilitate learning.

   - Incorporate learner interests into discussions, presentations, and exercises.

   - Help learners to build self-esteem by encouraging them to share areas of expertise and interesting experiences.

b. Some of these are negative experiences which can hinder learning.

   - Avoid expressing strong opinions concerning situations which might involve adult learners' personal problems, e.g., people who are on welfare, parents whose children get into trouble with the law, couples who divorce, etc.

   - Help adults to realize ways in which the present learning situation is different from previous experiences.

ADULT LEARNERS USUALLY HAVE OUTSIDE WORK AND FAMILY RESPONSIBILITIES.

- Keep adults informed about available support systems such as counseling, placement, health care and child care services, and financial aid opportunities.

- Express concern when adults miss class or fail to complete assignments but avoid judgment.
- Listen to learners if they wish to discuss their personal lives and problems, but do not pressure them into doing so.
- Allow as much in-class work time as possible.
- Avoid heavily basing in-class work on previous homework. Students who have not had time to prepare will feel lost or see no point in attending.
- Bring several copies of past handouts to each class for those who are returning after an absence.

AS ADULTS AGE, THEY REQUIRE MORE TIME FOR LEARNING TASKS. THE LEARNING RATE AND REACTION TIME DECLINE ALTHOUGH LEARNING ABILITY MAY NOT.

- Arrange activities to allow for different learning rates (Provide supplementary exercises for those who finish quickly; arrange informal peer-tutoring situations, etc.)
- Help slower adults to realize that speed does not necessarily reflect learning capabilities.
- Avoid introducing too many new concepts too quickly.
- Avoid situations in which learning rates are compared.
- Be alert to facial expressions which indicate lack of understanding.
- Preview media presentations to assess pace and concept load.
- Allow frequent opportunities for questions.

ADULT LEARNERS FIND THAT THEIR ADULT LEARNING EXPERIENCE IS MORE HETEROGENEOUS IN TERMS OF AGE, INTERESTS, AND EXPERIENCES OF CLASSMATES THAN THE LEARNING ENVIRONMENT TO WHICH THEY WERE EXPOSED AS CHILDREN.

- Structure the experience to provide for different learning rates, especially when the group age span is great.
- Be alert to the distress of older adult learners at what they perceive to be a lack of respect and responsibility on the part of the younger learners.

- Be alert to the impatience of younger adult learners toward the opinions, attitudes, and learning habits of older adults.

- Be prepared to accommodate a wide variation of backgrounds and interests.

- Monitor your opinions and vocabulary to avoid offending learners.

ADULT LEARNERS MAY BECOME MORE SENSITIVE TO THEIR PHYSICAL ENVIRONMENT AS THEY AGE.

- If possible, avoid physical learning environments that are obviously designed for children.

- Provide comfortable seats and desks with a clear view of the instructor and the board.

- Keep the temperature at a comfortable level for those present.

- Provide adequate lighting and ventilation.

- Control the noise level but remember that adults are rarely in noise-free learning environments. It can be beneficial for GED adult learners to learn to concentrate in spite of moderate environmental distractions.

- Accommodate the adult learner's concerns. Leave the evening classes as a group if parking facilities are poorly lighted and adults express concern. Be prepared to alter class plans if weather conditions hinder learner concentration.

OLDER ADULT LEARNERS

As many ABE instructors have noticed, older adults are returning to the classroom in increasing numbers. Although usually initially anxious about re-entering the world of formal education, the older adult student often becomes the most vitally committed learner in the class. In addition, the older adult can often provide a valuable reservoir of experience of benefit to all those involved. It is an injustice to the older adult student to assume that learning capabilities and productivity diminish with age. If the instructor is aware of the following facts, he may be able to enrich the learning experience for both the older adults and their fellow students.

OLDER ADULTS USUALLY EVIDENCE HEARING DIFFICULTIES SINCE AUDIO ACUITY (THE ABILITY TO DISCRIMINATE AND COMPREHEND SOUND) PEAKS AT AGE 15 AND THEN DECLINES GRADUALLY BUT CONSISTENTLY. PITCH DISCRIMINATION DETERIORATES GRADUALLY FROM AGES 25 TO 55 AND THEN DECLINES RAPIDLY.

- Arrange classroom so that there is seating close to the front for adults who wish to make use of it. Offer the option, but do not insist upon it.
- Consider audio abilities of the learners when planning forms of information. For example, a record without visual reinforcement could prove of little value to adults with hearing difficulties.
- Speak slowly and distinctly.
- Use visual reinforcement such as chalkboard, overhead projector, charts, and graphs for key information and important assignments.
- Repeat important points and summarize often.
- Repeat questions from the group before answering them.
- Do not turn away from learners while still speaking to them. Adults become increasingly (and often unconsciously) more reliant on lip-reading as they age.
- Be alert for facial expressions which indicate lack of understanding.

OLDER ADULTS OFTEN EXPERIENCE DECREASED VISUAL CAPABILITIES. VISUAL ACUITY (DISCRIMINATION OF DETAIL) PEAKS AT AGE 18. THERE IS A SLOW BUT CONTINUOUS DECLINE TO APPROXIMATELY AGE 40 AT WHICH POINT A SHARP DECLINE IN VISUAL CAPACITY BEGINS.

- Arrange classroom so that there is seating close to the front for those who wish to make use of it.

- Consider visual abilities of the learners when planning forms of presentation. For example, a single-monitor videotape presentation will be very difficult for a large group to see.

- Provide audio reinforcement such as reading all visuals presented.

- Prepare original handouts in strong color contrasts (black on white is preferable) with double-spaced pica type. If dittoing materials in blue and white, xerox enough copies of the original for class members with visual problems. Avoid the xerox to thermofax to ditto machine cycle when possible since each machine "fuzzes" the print slightly and makes distinction of the final copy difficult.

- Keep visual screens and chalkboards glare-free and clean. Excessive chalk dust on a board reduces the color contrast necessary for clarity.

- Be alert for facial expressions such as squinting which warn of visual difficulties.

SPEED OF PERFORMANCE AND SPEED OF REACTION TIME TEND TO DECLINE WITH AGE.

- Structure class activities so that learners can work at individual rates.

- Avoid comparison exercises.

- Allow adequate time for response and note-taking.

- Provide a varied class structure, but do not include too much in terms of content or activities in one session.

- Take time to orient learners to new tasks, especially if they involve techniques which were not in use when the learners were last in school (e.g., computer answer sheets).

HEALTH CONDITIONS AFFECT PERFORMANCE.

- Provide a comfortable physical learning environment. (see "Adult Learner" section, characteristic 8)

- Provide information concerning health care services available to learners.

- Remember that older adults in good health are generally highly capable learners. Avoid sterotyping older adults thereby patronizing them and expecting a lower standard of performance.

YOUNGER ADULT LEARNERS

To the instructor who is not used to dealing with younger adult learners, the challenge can be both frustrating and rewarding. Younger adults are often in a state of transition, with changing roles and responsibilities. Many feel insecure and may project boredom with educational activities. Some younger adult students become disruptive, and many quietly disappear. The instructor who can capture the interest of such a student experiences the satisfaction of success; "I wish you'd been my teacher in the real school" can be the highest kind of pay. The following suggestions may help the instructor reach the younger adult learner.

THE YOUNGER ADULT IS USUALLY IN A STATE OF ROLE AND RESPONSIBILITY TRANSITION BROUGHT ABOUT BY MARRIAGE, PARENTHOOD, CHANGE OF RESIDENCE, CHANGES IN JOB RESPONSIBILITIES AND CAREER DIRECTIONS, CHANGES IN FINANCIAL SITUATION, ETC.

- Keep learners informed concerning available support systems such as personal and career counseling, job placement, health and child care services, recreation offerings, and financial aid opportunities.

- Look for signs that learners are experiencing some non-academic difficulties and would appreciate some help and guidance. Possible clues would include poor attendance, lack of class preparation, noticeable changes in behavior, and increased sociability with instructor (whether difficulties are brought up or not).

- Consider carefully before making comments which will appear "parental" and thus prove a threat to a struggling sense of independence.

- If it is a common practice for the instructor or counselor to contact learners who have missed several sessions, explain this to students so that they do not see it as a "truant officer" method reserved for younger students.

- When telephoning an adult learner concerning attendance or classwork, do not discuss the situation with parents, spouses, or other relatives and friends if the student is not available.

- Contact the learner after two or three consecutive absences to see if there is a need for assistance. The drop-out rate for this group is extremely high.

AN INCREASING NUMBER OF RETURNING YOUNG ADULT LEARNERS LEFT SCHOOL ORIGINALLY BECAUSE THEY SAW NO PURPOSE IN EDUCATION.

- Create an atmosphere in which the learner feels responsible for the management of the learning experience. This can be done by having the student assess personal needs, and plan, implement, and evaluate the program accordingly.

- Understand the learner's goals and provide constant, honest feedback as to his progress toward them.

- Be patient with an initial show of disinterest in the course and disrespect toward the instructor. If these feelings are a cover for insecurity, they will disappear as the learner feels more at ease. If the attitude is genuine, the learner will generally fail to see a purpose to his participation and accordingly drop out.

- Do not attempt to "buy" acceptance with the younger adult learner by radically altering your behavior to include popular slang, inappropriate vocabulary and humor, etc.

- Introduce yourself to your students with some indication as to what you wish to be called.

- Remember that younger students often express insecurity and lack of self-confidence as boredom, sarcasm, and indifference.

THE YOUNGER ADULT IS USUALLY A PRODUCT OF AN EDUCATIONAL ENVIRONMENT OF TECHNOLOGICAL INSTRUCTIONAL TECHNIQUES (e.g., FILMS, TELEVISION, COMPUTER-ASSISTED INSTRUCTION, ETC.) AND INDIVIDUALIZED, INTEREST-ORIENTED CURRICULA.

- Vary presentation format and include available media when possible and appropriate.

- Consider using familiar movies and television shows as illustrations when appropriate.

- Do not assume that younger adult learners will have a strong background in basic fundamentals such as grammar, usage, spelling, math facts, etc.

- Capitalize on the fact that the younger student is often very test-wise, especially in terms of standardized tests.

THE YOUNGER ADULT IS USUALLY HIGHLY CONCERNED WITH PEER APPROVAL.

- Provide class breaks and opportunities for informal interaction to encourage a positive and supportive social environment.

- If a younger adult learner exhibits disruptive behavior, observe the way in which the class deals with the situation before taking action. Often, the expression of peer disapproval is a sufficient corrective tactic.

ENGLISH AS A SECOND LANGUAGE ADULT LEARNERS

When the English as a Second Language adult learner enrolls in a non-ESL class such as pre-GED or GED, it is easy for the instructor to forget that this learner still has special needs. Many times the goals of the ESL adult vary greatly from those of the other class members, and the instructor has a responsibility to understand these goals and help the learner chart a course toward achieving them. In addition, the instructor must be constantly aware of the confusion and frustration which the language barrier adds to the already difficult tasks of mastering the content. Care must be taken to provide the ESL adult learner with a supportive and understanding learning environment in which he may retain his self-esteem and realize his goals. The instructor's awareness of the following points may contribute to the creation of such an environment.

THE ESL ADULT LEARNER OFTEN EXPERIENCES A LOSS OF SELF-ESTEEM DUE TO THE FRUSTRATION OF NOT BEING ABLE TO COMMUNICATE.

- Discover the learner's areas of interest and expertise and provide opportunities for him to share them with the group.
- Provide positive, truthful feedback as to the learner's progress.
- Avoid culturally judgmental comments.
- Limit illustrations and references which are U. S. culture-based and thus meaningless (e.g., Christian traditions, common children's fairy tales and nursery rhymes, American historical events, etc.).
- Seek methods for making the ESL learner independent of the instructor.
- Do not patronize the learner.

PROBLEMS RELATED TO "CULTURE SHOCK" MUST BE DEALT WITH BEFORE CONCENTRATED LEARNING CAN TAKE PLACE.

- Provide ongoing information about available support systems such as counseling and placement services, health care and child care facilities, and financial aid opportunities.
- Look for indications that the learner is experiencing non-academic difficulties and would appreciate help and guidance.

- Acquaint yourself with the learner's previous educational experiences. Discuss with the student facets of the new environment which may be different or confusing to him (e.g., informality of the learning situation, sex of the instructor, individua .ed and multi-level instructional format, relationship oı student with instructor, etc.).

THE LEVEL OF ENGLISH LANGUAGE PROFICIENCY IS NOT AN INDICATOR OF INTELLIGENCE.

- Do not assume that the student with deficient English skills is a slow or disabled learner.

- Learn as much as possible about the learner's educational background to ascertain the learning approach and format with which he is most likely to feel comfortable.

ENGLISH LANGUAGE PROFICIENCY IN ONE SKILL AREA (SUCH AS ORAL COMMUNICATION) DOES NOT NECESSARILY INDICATE PROFICIENCY IN OTHERS.

- Assess learner capabilities in the areas of oral and written communication and ascertain reading level as soon as the learner joins the class.

- Speak slowly and distinctly. Do not assume that speaking loudly is of benefit.

- Limit the use of unusual or slang expressions. When such expressions are used, they should be followed by a context definition.

- Present new terminology and information both verbally and visually.

- Speak only while facing the class.

ANNOTATED REFERENCES

Amstutz, Donna, "Visual and Auditory Losses and How They Affect Learning in Older Adults." A paper presented at the 1977 Illinois Adult Education Association PACE Conference, May 5, 1977.

Short paper presenting learning implications of visual and hearing losses in older adults. Available on request through the Region I Adult Basic Education Service Center, 3901 S. State St., Chicago, Ill. 60609.

Bischof, Ledford J. Adult Psychology. (2nd ed.). New York: Harper and Row, 1976.

General source concerning physical, psychological, and sociological stages and statuses of adult life.

Burrichter, Arthur and Keith Lape. The Adult Learner. DeKalb, Illinois: Northern Illinois University, 1970.

A collection of articles including information on continuing education in Illinois, adult counseling, and teaching English as a new language.

Chapman, Jean and Elizabeth L. Salse. "Adult English as a Second Language Program Philosophy." Palatine, Illinois: William Rainey Harper College, 1975.

Statement of the philosophical guidelines which shape the Harper College ESL program.

Kidd, J. R. How Adults Learn. New York: Association Press, 1973.

A book presenting theories of adult learning and listed as "not for theorists by a theorist but for practioners by a practioner." A revised version of an earlier edition.

Knowles, Malcolm S. Modern Practice of Adult Education. New York: Association Press, 1970.

General source of practical information about the nature and organization of adult education and methods and materials for adult learners.

Marks, Muriel. GED Instructor's Handbook, Section B: Teaching Adult Students. A special demonstration project conducted under provisions of section 309 of the Federal Adult Education Act, P. L. 91-230, as amended and funded by the Illinois Office of Education, Adult and Continuing Education Section, 1974.

Instructor methodology handbook dealing with adult learners and their learning styles. Largely in outline form. Available on loan through the Region I Adult Basic Education Service Center, 3901 S. State St., Chicago, Ill. 60609.

Rountree, Mary and Muriel Marks. GED Instructor's Handbook, Section A; A Review of the Literature in ABE - GED Instruction. A special demonstration project conducted under provisions of section 309 of the Federal Adult Education Act, P. L. 91-230, as amended and funded by the Illinois Office of Education, Adult and Continuing Education Section, 1974.

Pre-GED and GED instructor handbook about GED test content and methods and materials for test preparation. Available on loan through the Region I Adult Basic Education Service Center, 3901 S. State St., Chicago, Ill. 60609.

Smith, Robert M. and others, eds. Handbook of Adult Education. New York: Macmillan, 1970.

Edited collection of articles about the form, function, and future of adult education. Sponsoring institutions and organizations and program areas are also discussed.

Tough, Allen. The Adult's Learning Projects. Toronto: The Ontario Institute for Studies in Education, 1971.

Formalized study of informal adult learning.

SECTION II - SPECIFIC LEARNING PROBLEMS (DISABILITIES) OF ADULTS

In addition to the general learning characteristics of adults presented in the previous section, some adults do display other specific learning problems. These learning problems are not unique to any age and are similar to the learning disabilities exhibited by school-age children.

Learning Disabilities in the Adult Population

Some authorities estimate that between 10 and 20% of the school age population has some form of learning disability. It is not unreasonable to assume that in many ABE programs the percentage of students with learning disabilities may reach the upper limits of this range. Dr. Dale Jordon, of the Jordon-Adams Learning Center in Oklahoma City, has stated that diagnostic testing of some ABE groups reveals that as many as 60% of these ABE students (excluding ESL students) have some form of specific learning disability.[2] Many ABE students who are enrolling in programs now left school five or more years ago, at a time when learning desabilities services were not as available as they are presently.

Definition of Learning Disabilities

It is central to a definition of learning disabilities to understand what they are not. If a student's academic difficulties are caused primarily by mental impairment, emotional problems, lack of educational experience, or physical and sensory handicaps then the student is not classified as learning disabled. However if a student, for no apparent reason, has difficulty in the academic areas of reading, writing, spelling, or math, then learning disabilities can be suspected. In general terms, the learning disabled student is one who appears to have at least average intelligence but who is having a great deal of difficulty with some aspect of learning.

Causes

The exact cause of learning disabilities is unknown. Many authorities assume that learning disabilities are caused by some degree of brain injury before, during, or after birth, but this hypothesis has not been fully substantiated. The learning disabled student is one who has met a roadblock somewhere in the learning process. Figure 1 offers a simplified schematic of the

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[2]Dale Jordon, "Learning Disabilities and the ABE Student," workshop address presented at the Harper ABE Staff Development Workshop, Wheeling, Illinois, April, 1977.

process of learning.[3] Simply stated, in the learning process the brain receives stimuli in the form of auditory, visual, and haptic (touch and muscle movement) modes. The brain receives the information and organizes, discriminates, and attaches meaning to the information by the modes mentioned. Processing involves all of the elements that are often considered in the phrase "reasoning and thinking." Once information has been processed, the person expresses the information in a motoric (by gestures or writing), vocal, or thought manner. Additionally, the brain continuously feeds back information in order to analyze and alter responses.

Identification and Teaching Strategies

How does an ABE instructor recognize the LD student? One helpful tool for identification may be the Behavioral Checklists included in this handbook. The Behavioral Checklists which begin on page 20 are separated into two general modality categories - visual and auditory. Students with learning disabilities usually display characteristics described on one of the checklists and have difficulty in receiving, processing, or expressing information primarily through that modality. Even though the instructor is not an expert in LD correction, he can employ compensatory tactics to meet the needs of learning disabled students. Compensatory tactics are teaching strategies that take into account the areas of learning disability and attempt to bypass them, while still teaching the subject matter that the student enrolled in the class to learn.

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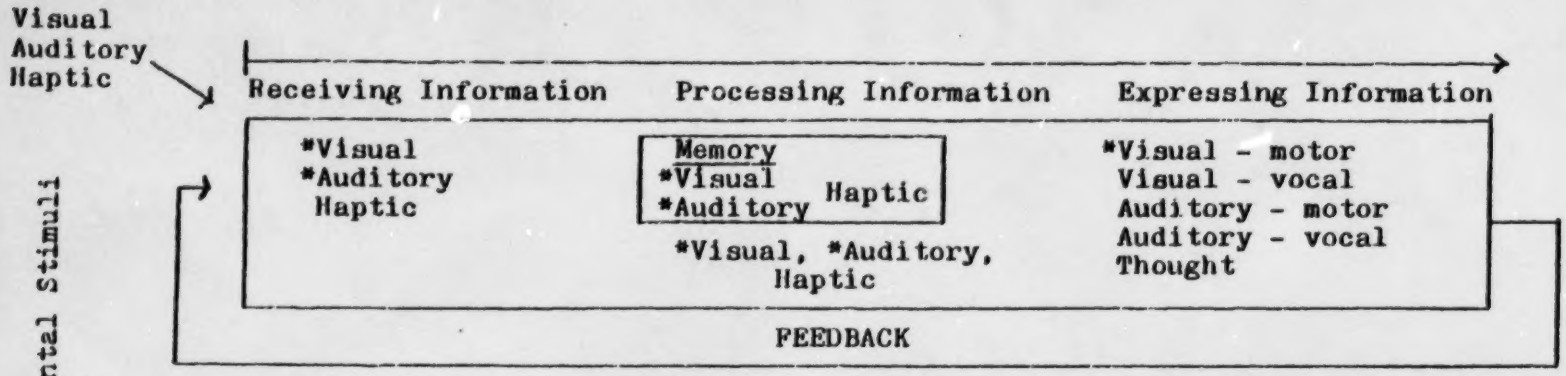
[3]This model has been adapted from Samuel A. Kirk and Winifred D. Kirk, Psycholinguistic Learning Disabilities: Diagnosis and Remediation (Urbana: University of Illinois Press, 1971), p. 19.



Receiving (functions)	Processing (functions)	Expressing (functions)
organizes	*memory	thought
*discriminates	*interpretation	gestures
*attaches meaning	*categorization	*writing
	convergent thinking (direct solution)	speech
	divergent thinking (creativity)	
	evaluative thinking	

Note: Some elements of convergent, divergent, and evaluative thinking in both the auditory and visual modes are covered in the unit on reading comprehension.

*Modalities and processes accounted for, in part or in full, in the Behavioral Checklists and Compensatory Tactics Units of this handbook.

Figure 1-Adapted Model of the Learning Process

How to use the Behavioral Checklists and Compensatory Tactics[4]

1. Identify a student as having academic difficulty in either language arts or math. Remember, the student does not appear to be primarily mentally impaired, emotionally disturbed, educationally deprived, or physically or sensorially handicapped. The student seems brighter than current achievement indicates.

2. Refer to the Visual Behavioral Checklist and Compensatory Tactics for your subject area - language arts or math.

3. Read through the behaviors listed (these appear in upper case type), and check those that apply to the student in question.

4. Repeat steps 2 and 3 with the Auditory Behavioral Checklist and Compensatory Tactics.

5. For each behavior checked, note the compensatory tactics listed immediately following. Tactics for the general behaviors described can be employed without a great deal of difficulty. Tactics for specific behaviors will, of course, require more involvement on the part of the instructor.

Cautions

Most adults with learning disabilities of a moderate to severe nature would probably be enrolled in a basic skills class. If the institution does not have a minimum reading or math level for inclusion in GED classes, many of these students will also be enrolled in GED classes.

One must be very careful in assessing learning disabilities in ESL students. Because of the language difference one cannot assume a "breakdown" in the learning process if the model of the process is based on the English language. However, it is hoped that ESL students experiencing difficulty in academic subjects can also be helped by utilizing some of the tactics outlined in this section of the handbook.

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[4]For students making no progress, or for those displaying severe learning problems, a guide to community resources is offered in Appendix B. These facilities have specially trained individuals who can administer a full test battery and can work with the adult LD student on a one-to-one basis with special exercises to improve (i.e, remediate) his area of difficulty. The goal of this handbook, however, is to give the instructor compensatory tactics to use with students in the here-and-now classroom situation.

VISUAL BEHAVIORAL CHECKLIST AND COMPENSATORY TACTICS

LANGUAGE ARTS

General Behavior

THE LEARNER MAY RESPOND BETTER TO ORAL PRESENTATIONS AND DISCUSSIONS THAN TO VISUAL AIDS, WORKSHEETS, BOARD WORK OR SEAT ASSIGNMENTS.

- When visual aids are used in class, supplement such aids with a verbal explanation.
- It will be helpful if the instructor would talk about any writing or diagrams posted on the board.

Specific Behaviors

THE LEARNER MAY REVERSE, INVERT, OR OMIT WORDS IN READING.

- Have the learner write or trace with pen or finger the corrected version of a letter or word that has been reversed. Have the student practice writing the corrected letter or word often.
- The ditto materials offered by Continental Press, Inc. (see Appendix A - Material: A) will give the student practice in detecting reversals.
- If a learner inverts or omits words, have him use an index card placed under the sentence being read as a visual guide. The instructor can also tell the student to underline slowly the words as he reads.

THE LEARNER MAY EXHIBIT LIP MOVEMENT (SUB-VOCALIZATION) WHEN READING SILENTLY.

- Lip movement may be a compensatory tactic the learner has developed on his own. Therefore, the instructor will have to use his judgment in deciding if lip movement is to be eliminated.
- Instruct the learner to pace his reading with his hand as he reads.
- Have the learner make a conscious effort not to move his lips while reading by placing his tongue against the back of his upper teeth.
- After practice, have the learner move his hand more rapidly across the page, forcing him to read faster.

THE LEARNER MAY HAVE DIFFICULTY PERCEIVING CERTAIN LETTER PATTERNS IN WORDS, FOR EXAMPLE, INABILITY TO RECOGNIZE PREFIXES AND SUFFIXES.

- The learner experiencing difficulty with the visual aspects of reading should be instructed in and encouraged to use phonetic skills which utilize the auditory modality. The instructor can identify the phonetic skills that a learner does not know, either informally or by administering the Phonics Knowledge Survey (see Appendix A - Material: W), and teach the weak areas (see Appendix A - Material: P8).

- This type of learner may be proficient in pronouncing common prefixes and suffixes, but unable to visually pick these elements out of words. Inability to recognize prefixes and suffixes contributes to poor reading ability. Any teacher-made activity which visually separates word-parts will train the student in "looking" for prefixes and suffixes. For example, words can be written on index cards with the prefix or suffix in red. The student can be taught the meaning of these affixes and be led to a greater understanding of words. It may also be helpful to have him practice writing prefixes and suffixes from memory to strengthen his ability to recognize these elements. Some commercial materials are available which visually separate affixes from word stems (see Appendix A - Materials: C,D).

THE LEARNER MAY HAVE DIFFICULTY REMEMBERING SIGHT WORDS.

- Learners who have a visual learning problem often have difficulty recalling sight words, especially words that are not phonetic or words that have similar configurations (they, there, where). Drill with auditory and kinesthetic (using the muscle movement of the hand) clues can be very helpful in teaching sight words to these learners. Problem words can be identified by the instructor or learner and printed on index cards in large letters. The learner can then trace each word three times with his index finger while saying the word. Next, the learner should write the word from memory. This process can be repeated often until he can recognize the word at sight.

- A language master (see Appendix A - Material: E) or a tape recorder can be used to teach sight words. The instructor should write sentences on the language master cards or on paper if using a tape recorder. Each sentence should contain one sight word being studied and the word should be underlined. The learner should read the sentence and attempt to say the word. After he has done this, he should play the language master or tape recorder to see if he is correct.

THE LEARNER MAY HAVE EXCESSIVE SPELLING ERRORS. MISPELLED WORDS OFTEN CONTAIN THE CORRECT LETTERS BUT THEY WILL APPEAR IN THE WRONG SEQUENCE.[5]

- The instructor should test a learner's skill in spelling the Dolch Words (see Appendix A - Material: F) and identify those words needing work. These words should be mastered first and additional words can be added later.

- The instructor then divides the spelling words into two groups: (1) words that are phonetic - words that generally follow phonetic rules, and (2) words that are not phonetic. The learner with visual learning problems needs to be helped with visual sequencing, a major skill in being able to spell correctly. He should also be encouraged to learn as many phonetic spelling generalizations as possible, since this is probably a strong area for the student. A suggested procedure for teaching spelling words is outlined below:

	Phonetic Word (Spell word by Sound Units)	Unphonetic Word (Spell word by Letter Units)
Instructor Says:	supersede	psycho
Student's Worksheet:	__persede	_sycho
Student's Response:	supersede	psycho
Instructor Says:	seupersede	psychc
Student's Worksheet:	_____sede	__ycho
Student's Response:	supersede	psycho

- Several words can be learned at the same time. Once the student has learned the method, he can set up his own worksheets at home as long as someone is available to dictate the words. This procedure should be continued until the student can write the entire word correctly from memory. Review of words that have been mastered should be conducted frequently.

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[5]Helmer R. Myklebust and Doris Johnson, Learning Disabilities: Educational Principles and Practices, (Grune and Stratton: New York and London, 1967), pp. 239-242.

THE LEARNER MAY HAVE DIFFICULTY LOCATING SPECIFIC INFORMATION IN A READING PASSAGE ONCE THE PASSAGE HAS BEEN READ.

- The learner should be instructed in techniques of pre-reading (skimming), reading important sentences aloud, and using a pencil to underline important information. When skimming, the learner should be instructed to read the first and last sentences of each paragraph. Next, the student should return to the passage and read it silently while underlining the information that he feels is important. If the reading passage includes questions, the student should read the questions aloud after skimming and before reading the passage silently. The Specific Skills Series offers practice in locating information and can be adapted to the above approach (see Appendix A - Material: P1).

THE LEARNER MAY BE UNABLE TO PERCEIVE DETAILS IN CHARTS, GRAPHS, AND MAPS.

- If the learner is confused by the visual material presented in charts, graphs, and maps, the instructor can compensate for this confusion by using verbal and concrete descriptions of the graphic material. For example, ABE students are sometimes taught to recognize longitude and latitude in map-reading. These map symbols can be explained by using a great deal of verbal description. Associative clues can be taught, such as "long" reminding a student of the way longitude lines run on a map. In extreme cases, a three dimensional representation of the map, chart, or graph should be used.

- Commercial materials that cover basic map, chart, and graph skills and include tapes for additional auditory clues are available (see Appendix A - Material: B).

THE LEARNER MAY BE CONFUSED BY AND UNABLE TO USE AN IBM ANSWER SHEET.

- Have the learner practice reading questions and marking answers on an IBM Sheet. He should use an additional visual aid (index card, check marks, or thumb next to question being answered) for locating and marking the answer. The aid or "crutch" can later be eliminated.

THE LEARNER MAY HAVE ILLEGIBLE HANDWRITING. HANDWRITING MAY INCLUDE REVERSALS, INVERSIONS, OMISSIONS, OR POOR SPACING.

- For this disorder it is important to note if the learner makes errors when copying or when writing from memory. The following tactics will help compensate for disabilities of both types.

Errors in Copying

1. Demands for legible, neat work should be kept to a minimum.

2. Discover whether the learner's ability improves when he uses an alternate style (e.g., cursive or manuscript), and encourage the student to use his better style.

3. Have the learner practice tracing letter and word forms. A commercial material available for this purpose is listed in Appendix A (Material: G).

4. If the learner spaces words incorrectly, have him use his thumb as a spacing guide between words.

5. Encourage the learner to use a typewriter whenever possible.

Errors of Memory

1. Suggestions 1,2,3 and 5 above can also be used effectively for this disorder.

2. Have the learner practice his handwriting by adding auditory clues. For example, as the learner attempts to write a cursive m he could "talk through" the letter form: "we start up here and swoop down, and the m has two humps."

3. Letters that the learner has difficulty writing can be traced on the back of his hand with the eraser end of a pencil. The student is asked to concentrate on the "feel" of the letter form. He then attempts to write the letter from memory.

VISUAL BEHAVIORAL CHECKLIST AND COMPENSATORY TACTICS

MATH

General Behavior

THE LEARNER MAY RESPOND BETTER TO ORAL PRESENTATIONS AND DISCUSSIONS THAN TO VISUAL AIDS, WORKSHEETS, BOARD WORK OR SEAT ASSIGNMENTS.

- When visual aids are used in class, supplement such aids with a verbal explanation.
- Discuss any writing or diagrams posted on the board.

Specific Behaviors

THE LEARNER MAY REVERSE DIGITS WHEN READING A NUMBER ORALLY.

- Have the learner trace the numerals with his finger or pencil in drill fashion until he is able to "feel" the correct version. Have him practice writing the corrected numerals often.

THE LEARNER MAY EXPERIENCE DIFFICULTY WITH NUMBER-SYMBOL RELATIONSHIPS, SUCH AS PLACE VALUE AND FRACTION CONCEPTS.

- A student with a visual learning problem may have difficulty attaching meaning to a numerical symbol. The problem may manifest itself as an inability to read place-value or to understand fraction concepts. To compensate for this problem, use concrete teaching devices whenever possible.

  1. Place Value - Use a teacher-made place value chart which indicates in columns the ones, tens, etc. positions of numerals. The learner practices reading various numerals from the chart. A variation of this method would be to use concrete items such as different colored blocks, with each color representing a place value along with the chart. Or, the instructor may have the learner use large block graph paper, with each block shaded in a different color representing various place values.

     A learner may also practice reading place values set-up by the instructor on language master cards (see Appendix A - Material: E). The learner records the number and then plays the instructor track of the card in order to confirm his guess.

2. Fraction Concepts - Concrete devices such as fraction blocks, cut-up pie figures, diagrams on the board, or rulers will teach the learner to read fractions, as well as to "see" the relationship between numbers in a fraction. The language master can also be utilized in a variety of ways.

THE LEARNER MAY ALLIGN NUMERALS INCORRECTLY WHEN COMPUTING A PROBLEM.

- Learners should be given additional visual clues when computing problems. One method of establishing extra visual support is to draw number columns in problems. Example:

				2	8	8	3
			x		7	4	3
				8	6	4	9
		1	1	5	3	2	
	2	0	1	8	1		
2	1	4	2	0	6	9	

- Learners may also work problems on graph paper, placing one numeral in each square.

THE LEARNER MAY NOT BE ABLE TO REMEMBER THE VARIOUS STEPS INVOLVED IN MULTI-PROCESS PROBLEMS.

- Multi-process calculations, such as double-digit multiplications, division, and fractions, can be taught by having the student learn to orally "talk through" the steps in a problem. A tape recorder can be used. A learner might memorize the steps in long division by hearing or saying the following while computing: First, we divide and put the answer on top, next we multiply, then we subtract, and then we divide again.

- Additional practice in this skill can be provided by presenting the learner with a problem that has been miscalculated, i.e., a step omitted or out of sequence. The learner is required to identify and correct the problem.

THE LEARNER MAY EXPERIENCE DIFFICULTY IN ANALYZING AND COMPUTING APPLICATION PROBLEMS (WORD PROBLEMS, TIME, MONEY, MEASUREMENT, ETC.) WHEN SUCH PROBLEMS ARE PRESENTED IN A WRITTEN OR DIAGRAM FORM.

- Troublesome problems can be read into a tape recorder beforehand. The learner listens to the problem as he reads along.

- The learner can orally "talk through" a word problem and diagram the problem before attempting to calculate it.

THE LEARNER MAY HAVE DIFFICULTY REMEMBERING THE MEANING OF MATHEMATICAL SYMBOLS SUCH AS PROCESS SIGNS AND ABBREVIATIONS.

- The instructor should identify the symbols with which the learner is having difficulty. These symbols can then be written on language master cards (see Appendix A - Material: E) with their explanations given on the instructor track of the tape. The learner can record his answer on the student track and check the validity of his response by listening to the instructor track.

  A tape recorder can be used in the same manner as the language master with cards corresponding in sequence to pre-recorded explanations.

- Learners can also be encouraged to drill on symbols by writing the symbol as they say its definition out loud.

- For some math symbols, learners should be encouraged to use associative clues in order to remember the meaning of each symbol. For example, the greater than ($>$) and less than ($<$) signs can be explained in terms of points. Just as there are two"points" on the left of the sign $>$, and only one "point" on the right $>$, 2 is greater than 1 ($2 > 1$). The reverse is true for the less than sign; i.e., there is only 1 point on the left and 2 points on the right, therefore 1 is less than 2 ($1 < 2$). The bigger number will always be where the two points are.

- Flash cards, with a diagram or representation of the process symbol on the reverse side, can also be helpful. The learner can "drill" with these cards saying the definition out loud.

THE LEARNER MAY BE UNABLE TO WRITE NUMERALS FROM MEMORY.

- The instructor and learner can identify numerals that are essential for the learner to remember, e.g., 5,280 ft. in a mile. The definition of the numeral can be written on a language master card (see Appendix A - Material: E). The answer or numeral can be recorded on the instructor track of the card. The learner should record his answer on the student track of the card and confirm his guess by listening to the instructor track.

- The student could practice writing and saying the numeral to be remembered.

THE LEARNER'S WRITTEN WORK MAY BE ILLEGIBLE. WORK MAY INCLUDE NUMERALS THAT ARE REVERSED, INVERTED, OMITTED AND POORLY SPACED.

- For this disorder it is important to note if the learner makes his errors when copying or when writing from memory. The following compensatory tactics will cover disabilities of both types.

Errors in copying

1. Demands for legible, neat work should be kept to a minimum.

2. Have the learner practice tracing correct versions of numbers that are often reversed, inverted, or omitted.

3. If the learner spaces his numerals poorly, have him use his thumb as a spacing guide between numerals.

4. Lined or graph paper for math problems can also be a useful spacing guide.

Errors of memory

1. Suggestions 1 and 2 above can also be used effectively for this disorder.

2. Numerals that the learner has difficulty writing can be traced on the back of his hand with the eraser end of a pencil. The learner is asked to concentrate on the "feel" of the number form. He then attempts to write the numeral from memory.

AUDITORY BEHAVIORAL CHECKLIST AND COMPENSATORY TACTICS

LANGUAGE ARTS

General Behavior

THE LEARNER IS LIKELY TO RESPOND BETTER TO VISUAL AIDS, WORKSHEETS, AND BOARD WORK THAN TO ORAL PRESENTATIONS AND DISCUSSIONS.

- When lecturing, write some of the information on the board, even if in an abbrieviated form.
- The use of visual aids, outlines, diagrams, worksheets, and the like will be very helpful to the student with auditory problems.
- When topics such as time, orientation, and space are discussed, it is helpful to use visual and concrete examples to define these abstract terms. For example, when discussing historical dates, a time line on the board is most helpful.

Specific Behaviors

THE LEARNER MAY EXPERIENCE DIFFICULTY IN REMEMBERING CONSONANT AND VOWEL SOUNDS. THE LEARNER MAY EXPERIENCE DIFFICULTY IN ATTEMPTING TO SOUND WORDS OUT.

- Learners should be taught by sight or whole word methods. If repeated instruction in phonetic analysis fails to increase the learner's word attack ability, phonics instruction should be suspended for the time being.

  Students can learn words by studying the words' configuration, by daily drill of troublesome words, and by learning an initial sight word and learning other words in the same family (e.g., hat, cat, pat).[6]

- Occasionally, poor auditory learners can learn to read through a tactile-kinesthetic (touching movement) approach. A basic tactile-kinesthetic approach is outlined on the next page.

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[6]Note: Some learners with an auditory learning problem may not be able to learn word families because of the rhyming factors involved.

1. Write word to be learned in large letters(manuscript) on a sheet of paper. If possible use a crayon to write the word. Crayon wax enables the student to "feel" the letter.

2. Have the learner trace the word with his index finger (letter-by-letter) several times while saying the whole word (not individual letters).

3. Remove the word and have the learner "write" the word in the air or on a table top with his finger. As the student "writes" the word he should say the whole word.

4. Have the learner write the word on a separate sheet of paper from memory.

5. Words being worked on and words mastered can be kept in a file box and reviewed often. Words should often be used in sentences or stories.

- Adults reading below a third grade level may be effectively taught through Experience Stories. These are the learners' own experiences dictated and copied by the teacher, and then read, copied, and re-read by the students.

- As a supplement to the whole word/sight method of reading, a learner should be taught to use other visual skills of word attack. Structural analysis, involving recognition of prefixes, suffixes, and root words may be effective.

- Since auditory learning problems vary in degree with the individual and since some phonetic analysis is desirable, the following criteria should be heeded before phonetic instruction occurs:

  The learner should have a considerable sight vocabulary.

  The learner should have gained some degree of confidence in his reading ability.

  The instructor can then gradually introduce some phonetic skills. If the skills prove to be "unattainable" for the student, then the program should be abandoned.

  Phonetic programs should be used in conjunction with visual clues. The goal is to have the learner associate a visual image with an appropriate sound. Sounds should never be taught in isolation, but always connected with a letter, within a word, and/or with a picture color clue.

- Even if the learner is only able to master the consonant sounds, he can use this skill in combination with other word attack skills. After having sounded out the initial consonant, the learner can finish the remainder of the sentence and then return to the unknown word. He can ask himself, "What word begins this way and makes sense in the sentence?" For more information on teaching context clues, see the unit on reading comprehension, page 36.

THE LEARNER MAY EXPERIENCE DIFFICULTY IN ATTEMPTING TO PRONOUNCE MULTI-SYLLABLE WORDS.

- The learner can be taught the "chin bump" method for breaking words into syllables. The learner places his hand under his chin and attempts to pronounce the word in an exaggerated fashion. When the learner's chin moves down or "bumps" (he'll be able to feel it with his hand), a syllable of the word has been spoken.

THE LEARNER FREQUENTLY SUBSTITUTES (CALLS THE WRONG WORD) WHILE READING.

- The instructor can read a passage into a tape recorder. The learner is then asked to listen to the tape while he reads along with it. The emphasis in this type of exercise is to have the learner raise his awarness in translating the visual symbol to the auditory counterpart.

- To vary this procedure, the learner can read a passage into a tape recorder. Then he can listen to the tape and re-read the passage, circling the words that he substituted.

- The learner can be asked to keep a file of words that he substitutes. He can drill with these words and learn them as sight words.

THE LEARNER MAY HAVE EXCESSIVE SPELLING ERRORS. MISSPELLED WORDS WILL CONTAIN "ILLOGICAL" OR UNPHONETIC CHOICES OF LETTERS.[7]

- The learner should be taught troublesome spelling words through a gradual process of visual closure. In other words, the learner is asked to supply only one letter at a time, until he can visually remember how to spell the whole word.

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[7]Myklebust and Johnson, pp. 239-242

The instructor should test a learner's skill in spelling the Dolch words (see Appendix A - Material: F) and identify those words needing work. These words should be mastered first, and additional words can be added later. The procedure to follow in teaching spelling by visual closure is outlined below:

Instructor Says:	"psychologist"
Student's Worksheet:	_sychologist
Student's Response:	psychologist

Instructor Says:	"psychologist"
Student's Worksheet:	__ychologist
Student's Response:	psychologist

Several words can be learned at the same time. Once the student has learned the method, he can set up his own worksheets at home as long as someone is available to dictate the words.

This procedure should be continued until the learner can write the entire word correctly from memory. Review of words that have been mastered should be conducted frequently.

THE LEARNER MAY BE CONFUSED BY QUESTIONS THAT CONTAIN QUALIFYING WORDS, SUCH AS ONLY, ALWAYS, NEVER, NOT.

- The learner should first be given practice in visually identifying qualifying words. Once words have been identified, the learner should circle these words when they occur in sentences or questions.
- The learner should be instructed to re-read the questions several times.
- As the learner re-reads the sentence, he should be instructed to "visualize", in concrete terms, what the questions is asking. For example: "A bill originating in the Senate might be amended by all of the following except---"[8]

    1. Learner reads the question several times and identifies the words all and except as qualifiers.
    2. Learner asks himself - "What does all refer to?, What is meant by except?"

[8]Richard Miner, Interpretation of Reading Materials in the Social Studies. Cambridge G. E. D. Program, (New York, Cambridge Book Co., 1973), p. 102.

3. Learner can "visualize" the word <u>all</u> to mean every member of a group - in this case the entire group of answers.

4. Learner can "visualize" the word <u>except</u> as a group of people with someone left out - on exception.

5. <u>All</u> refers to the answers, <u>except</u> means the one left out, or the one that does not belong. Thus, the question must want to know which answer does not belong.

This process may appear obvious to the casual observer, but to the adult with an auditory learning problem, the process of "reasoning by visual image" can be extremely helpful.

THE LEARNER MAY GIVE THE IMPRESSION OF KNOWING OR UNDERSTANDING A CONCEPT (BECAUSE OF PERFORMANCE ON A TEST) BUT BE UNABLE TO ADEQUATELY DESCRIBE OR DISCUSS THE CONCEPT.

- Not very much can be done in a compensatory way to aid a learner with a verbal expressive disorder. If the disorder is serious in nature, the learner can be referred to one of the agencies mentioned in Appendix B.

- Patience on the part of the instructor and not requiring a verbal response from such a learner are prime recommendations.

- The instructor could have the learner submit many of his responses or questions in writing and deal with these privately.

- If verbal responses are necessary, the instructor should structure his questions so that the learner can answer the question with a simple reply.

AUDITORY BEHAVIORAL CHECKLIST AND COMPENSATORY TACTICS

MATH

General Behavior

THE LEARNER IS LIKELY TO RESPOND BETTER TO VISUAL AIDS, WORKSHEETS, AND BOARD WORK THAN TO ORAL PRESENTATIONS AND DISCUSSIONS.

- When lecturing write some of the information on the board, even if in an abbreviated form.
- The use of visual aids, outlines, diagrams, worksheets, and the like will be very helpful to the student with auditory learning problems.
- When topics such as time, orientation, and space are discussed it is helpful to use visual aids and concrete examples to define these abstract terms. For example, when discussing historical dates, a time line on the board is most helpful.

Specific Behaviors

THE LEARNER MAY EXPERIENCE DIFFICULTY IN COMPUTING OPERATION AND APPLICATION PROBLEMS THAT ARE PRESENTED ORALLY.

- The most obvious compensatory tactic to use is to give visual support clues when problems are done orally in class. Use of the board, visual aids, and allowing the learner to read a problem as well as hear it will be helpful.
- The learner can be urged to "visualize" material mentioned in word application problems. If the problem states, "...a car salesman sold three used cars for $650 each, four cars for $875 each and two cars for $1100 each.....,"[9] the learner should either visualize or draw diagrams of the number of cars and their prices. The process of visual reasoning can be extremely helpful for adults with auditory learning problems.

THE LEARNER MAY EXPERIENCE DIFFICULTY IN RECALLING THE MEANING OF TERMINOLOGY PRESENTED ORALLY, FOR EXAMPLE, BASE, SET, SQUARE.

- The learner can be provided with flash cards with the troublesome terms written on one side. On the reverse side, the definition and a pictorial or visual representation of the term should be written. The learner should drill on these terms often.

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[9]Jerry Howett, GED, How to Prepare For The GED Exam. Test 5 Mathematics, (Chicago: Henry Regney Co., 1976), p. 25.

THE LEARNER MAY NOT BE ABLE TO RECALL BASIC ADDITION AND MULTIPLICATION FACTS.

- The learner should be encouraged to use a "crib" sheet that contains troublesome addition and multiplication facts.

- The learner can say and hear number facts in an effort to memorize the facts. Multiplication combinations can be printed (the problem part) on a language master card (see Appendix A - Material: E). The instructor can record the problem and the answer on the instructor track of the card. The learner can record the combination and his answer on the student track of the card. The learner then confirms his response by listening to the instructor channel.

- For students who simply cannot learn basic number combinations, concrete tactile crutches are the only answer. For example, the learner should be encouraged to multiply up to the combination he knows, and then on his fingers above that. Also, if a student can learn multiplication facts 1-5, he can use his fingers for facts 6-10. This procedure is outlined in Hayes' book, The Tuned-In Turned-On Book About Learning Problems (see Appendix A - Material H).

THE LEARNER MAY NOT BE ABLE TO COUNT BY ROTE.

- Commonly used numerals in rote counting (2,3,5,10,15,20, 25,30) can be placed in sequence on flash cards. Alternate numerals can be written in different colors. The learner uses his stronger visual memory skills to remember the sequence. For example, if a student were learning to rote count by 3's to 30, he would begin by learning a sequence of only three or four numerals at a time before more numerals were added to the sequence. Flash cards can be set up in the following manner:

3, 6, 9 green red green	12, 15, 18 red green red	21, 24, 27 green red green

Each card would be drilled individually and then as a group until the student mastered the entire sequence.

THE LEARNER MAY GIVE THE IMPRESSION OF KNOWING OR UNDERSTANDING A CONCEPT (BECAUSE OF PERFORMANCE ON A TEST) BUT BE UNABLE TO DESCRIBE ADEQUATELY OR DISCUSS THE CONCEPT.

- The reader is directed to the compensatory tactics listed for this behavior under the language arts section, page 30.

READING COMPREHENSION

Because the area of reading comprehension is complex and may involve the processing of information in the visual, auditory, and haptic (touch and muscle movement) learning modulities, the subject is treated separately. It is impossible to characterize the acquisition of meaning (comprehension) as solely a visual or auditory process. Furthermore, Myklebust and Johnson point out:

> ...clinical teaching experience and certain research studies suggest that the major problem of the dyslexic (student with a learning problem in reading) is not in understanding what he reads but in transducing.... In other words, dyslexics fail to comprehend because they cannot convert the visual symbol into the previously acquired auditory symbol.[10]

The visual and auditory aspects of reading that a learner may have difficulty with have been identified in the Behavioral Checklists, and suggested teaching tactics have also been enumerated. Most authorities, however, recognize that a student having difficulties with the decoding process will also need support in acquiring reading comprehension skills.

There are many types of comprehension skills. Major skills are listed below, from basic to complex, and are offered to the instructor as a guide in program planning. Under each skill, the reader is directed to materials presented in Appendix A that will aid the learner in developing that skill. The materials indicated by no means represent a definitive list but were chosen because they have proven to be effective in working with ABE learners.

Comprehension Skills

1. Vocabulary - Individual word meaning is the foundation of the higher comprehension skills. The more words that a student knows the meaning of, the greater the degree of understanding when encountering those words in reading. (see Appendix A - Materials I,J,K,L,M,N,O,)

2. Context Clues - The ability to derive meaning and/or pronounciation from a word by the way it is used in a sentence. (see Appendix A - Materials L,P1,N,)

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[10]Myklebust and Johnson. p. 190.

3. Details - The ability to understand and remember specific details (facts) in a reading passage. (see Appendix A - Materials: M,N,P3,Q9,R,ZZ)

4. Main Idea - The ability to recognize and recall the central theme presented by an author. (see Appendix A Materials: M,N,P4,Q1,R,ZZ)

5. Following Directions/Following a Sequence - The ability to follow an author's instructions and sequence of events as presented in a reading passage. (see Appendix A - Materials: P5,P6,Q8)

6. Inference - The ability to understand or draw a conclusion based on partial information given by an author. (see Appendix A - Materials: A2,M,N,P7,Q2,Q4,Q5,R,S, T1,T2,T3,ZZ)

7. Evaluation/Critical Reading - The ability to judge written material by some criteria. This skill is highly complex and involves such things as identification of author's organization, style, tone, figurative language, symbolic meanings, fact or opinion, character traits, etc. (see Appendix A - Materials: A2,M,N,Q3,A6,A7,R, T1,T2,T3,ZZ)

APPENDIX A. TEACHING MATERIALS AND TESTS

Material Code	Material/Publisher	Comments
A	1. Likenesses and Differences 2. Reading and Thinking Skills Continental Press, Inc. Elizabethtown, Pa. 17022	Visual discrimination. Comprehension, grades 1-6.
B	Individualized Cassette Learning Package #9205 - Graphs #9206 - Tables #9207 - How Do I Get There? Media Material, Inc. 2936 Remington Ave. Baltimore, Maryland 21211	Basic map and chart reading skills with tapes for additional auditory clues.
C	Webster Word Wheels McGraw-Hill Book Co. Manchester, Mo. 63011	Consonants, blends, prefixes, suffixes with visual support.
D	Word Prefix and Suffix Cards Kenworthy Educational Service, Inc. Buffalo, New York 14240	23 common prefixes and 24 suffixes visually separated from the word stem.
E	Language Master and Blank Cards Bell and Howell, Inc. 7100 McCormick Rd. Chicago, Ill. 60645	Offers visual and auditory clues. Cards and machine can be used in a variety of ways.
F	Dolch 220 Service Words	Available from many sources. The Dolch words make-up 50% of all reading matter. Should be taught as sight words.
G	Auto-Kinetic Handwriting Program Autokinetic Co. Amarillo, Texas 79120	Manuscript and cursive kits available. Student traces or copies from forms provided.

H	The Tuned-In, Turned-On Book About Learning Problems Marnell Hayes Academic Therapy Publications San Rafael, Calif. 94901	Pages 45-48 offers a concrete aid to multiplication. Book also has other compensatory suggestions. See bibliography for full listing.
I	Reader's Digest Reading Books 1-6 Reader's Digest Services, Inc. Pleasantville, New York 10570	Grades 1-6, stories with vocabulary, questions and glossaries (not always at an adult interest level).
J	Advanced Reading Skill Builder Books 1-4 Reader's Digest Services, Inc. Pleasantville, New York 10570	Jr. High level, stories with vocabulary and comprehension questions.
K	Thorndike Barnhart Beginning Dictionary Scott, Foresman and Co. 433 E. Erie St. Chicago, Illinois 60611	All levels - to be used at instructor's discretion. Definitions and most words used in sentences.
L	Increase Your Vocabulary Books 1 & 2 Cambridge Book Co. 488 Madison Ave. New York, New York 10022	Basic level, deals with prefixes, suffixes, homophones, antonyms, and context clues.
M	Introduction To Reading - Pre-GED Program Cambridge Book Co. 488 Madison Ave. New York, New York 10022	Upper elem. level, content area vocabulary in social studies, literature, science. Comprehension questions.
N	Reading Skill Power - 2 - GED Program Cambridge Book Co. 488 Madison Ave. New York, New York 10022	H. S. level. Content area vocabulary and comprehension questions.
O	Thirty Days to a More Powerful Vocabulary Funk, W. and Lewis, N. Washington Square Press, Inc. 630 Fifth Ave. New York, New York 10003	H. S. level - programmed vocabulary builder.

P

Specific Skills Series
(1) Locating the Answer
(2) Using Context Clues
(3) Getting the Facts
(4) Getting the Main Idea
(5) Following Directions*
(6) Detecting the Sequence*
(7) Drawing Conclusions
(8) Working with Sounds*
Barnell-Loft, Ltd.
958 Church St.
Baldwin, Long Island,
New York 11510

Covers specific comprehension skills from grades 1-6. Workbook format. *Advanced levels also available.

Q

Comprehension Skills Series
(1) Understanding the Main Idea
(2) Making a Judgment
(3) Understanding Characters
(4) Drawing a Conclusion
(5) Making on Inference
(6) Reccgnizing Tone
(7) Appreciation of Literary Forms
(8) Retaining Concepts & Organizing Facts
(9) Isolating Details & Recalling Facts

Upper elementary and H. S. level. Workbook format. Supplemental tapes available for additional auditory clues.

R

Critical Reading and Listening Skills - Sets A,B,C.
Instructional/Communications Technology, Inc.
Huntington, New York
11743

Grades 1-3. Comprehension skills. Workbook and worksheet format. Each comprehension skill is identified.

S

Reading Development Kit A
Addison-Wesley Publishing Co.
Menlo Park, Calif.
94025

Grades 3-6. Comprehension questions based on passages in the areas of work, health, safety, law, science.

T

Reading for Understanding Kits
(1) General
(2) Junior
(3) Senior
Science Research Associates, Inc.
259 E. Erie St.
Chicago, Illinois
60611

Grades 3 - college
Grades 3 - 8
Grades 8 - 12
Inference and evaluation skills comprehension questions.

U	Standardized Achievement Tests (various titles)	Since there are a variety of standardized achievement tests in use today, no single test is mentioned. The value of an achievement test score to the instructor is to insure that the material being assigned is instructional in nature, i.e., not too easy - not too difficult. Tests of a more diagnostic nature are mentioned below.
V	Gilmore Oral Reading Test Harcourt Brace Jovanovich, Inc. 757 Third Ave. New York, New York 10017	Suitable for learners reading from grade 1-8. Will render an instructional reading level but more importantly will allow the instructor to see what type of errors the student is making.
W	Durkin-Meshover Phonics Knowledge Survey Benefic Press 1900 N. Narragansett St. Chicago, Ill. 60639	Easily administered in 10-30 minutes. Will identify phonetic elements that the student is weak in.
X	Key-Math Diagnostic Arithmetic Test American Guidance Service, Inc. Publishers' Building Circle Pines, Minn. 55014	Tests students in basic math abilities from grades 1-8. Fourteen sub-tests measure abilitie in content, operations, and applications. Specifi problem areas are identified for the instructor.
Y	Mills Learning Methods Test The Mills Center Ft. Lauderdale, Fla. 33310	For use with students reading between primer and 3rd grade level. Tests a student's preferre method of reading: visual auditory, kinesthetic, or multisensory approaches.

Z	Wepman Auditory Discrimination Test Joseph Wepman, Ph.D. 950 E. 59th St. Chicago, Ill. 60637	Norms stop at 8 years of age, but students making a significant number of errors above that point can be suspected of having auditory discrimination problems. Auditory discrimination problems would make the acquisition of phonics extremely difficult.
ZZ	Idea Power For Reading Comprehension Lee Vogel Kolzow Prentice-Hall, Inc. Englewood Cliffs, N.J.. 07632	A programmed workbook suitable for 5th grade - college reading levels. Teaches location of main idea, details, and paragraph organization. Gives the student a "formula" to use in comprehending the written word.

APPENDIX B. RESOURCES FOR THE ADULT WITH LEARNING PROBLEMS

Note: The following agencies work with adults having specific learning disabilities. These agencies accept the adult involved or a direct referral by the adult's instructor. Referrals require a mere phone call. Specific procedures will be outlined at the time of the call. There is usually a fee involved with the service. Agencies listed render diagnostic and remedial services.

Illinois Institute of Technology Institute
for Psychological Services
55 E. 33rd Street
Chicago, Illinois 60616

Northwestern University Learning
Disabilities Clinic
Evanston, Illinois 60201
Phone: (312) 492-3183

*University of Chicago Speech and Language
Clinic
905 E. 59th Street
Chicago, Illinois 60637
Phone: (312) 947-6204

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*For students with a speech problem only, such as students having a verbal expression disorder as identified on Auditory Behavior Checklist.

ANNOTATED REFERENCES

Ashlock, Robert B. Error Patterns In Computation. Columbus, Ohio: Charles E. Merrill Publishing Co., 1972.

A programmed workbook for teachers. Instructs one in the diagnosis of common error patterns in mathematical computation and offers suggestions on how to correct such errors.

Brueckner, Zeo J. and Guy L. Bond. The Diagnosis and Treatment of Learning Disabilities. New York: Appleton - Century - Crofts, Inc., 1955.

Discusses diagnosis and treatment of reading, writing, spelling, and math difficulties.

Davis, Joanna S. and Ruth Edington. "Classroom Teaching Suggestions for Language - Learning Problems," Academic Therapy, V (Fall, 1969), 67-74.

An excellent article with many practical suggestions. Stresses language problems which encompass auditory and visual skills. A checklist of observable classroom behavior is provided and corrections are suggested.

Edwall, Eldon E. Locating and Correcting Reading Difficulties. Columbus, Ohio: Charles E. Merrill Publishing Co., 1970.

A handbook which lists specific reading difficulties. Suggested methods and materials for correcting the specific reading difficulties are offered.

Hammill, Donald D. and Nettie R. Bartel. Teaching Children with Learning and Behavior Problems. Boston: Allyn and Bacon, Inc., 1975.

Offers a general overview as well as teaching tactics for children with learning disabilities. Some of the suggestions are applicable to adults.

Howett, Jerry (ed.). How to Prepare for the High School Equivalency Examination. Test 5, The Mathematics Test. Chicago: Henry Regnery Co., 1976.

Hayes, Marnell L. The Tuned-In, Turned-On Book About Learning Problems. San Rafael, California: Academic Therapy Publications, 1974.

A handbook written for LD adolescents. Gives many practical suggestions for the visual learner and the auditory learner.

Johnson, Marjorie S. and Roy A. Kross. "Individual Reading Inventories." In Donald D. Hammill and Nettie R. Bartel (eds.), Educational Perspectives in Learning Disabilities. New York: John Wiley and Sons, Inc., 1971. pp. 183-201.

Instructs teachers in the skill of constructing, administering, and scoring their own informal reading inventories.

Jordon, Dale. "Learning Disabilities and the ABE Student." Wheeling, 1977. (workshop address presented at the Harper College ABE Staff Development Workshop. April 30, 1977)

Kaluger, Geroge and Clifford J. Kolson. Reading and Learning Disabilities. Columbus: Charles E. Merrill Publishing Co., 1969.

A rather technical book that attempts to merge the fields of learning disabilities and reading disabilities. This book contains much valuable information.

Kirk, Samuel A. and Winifred D. Kirk. Psycholinguistic Learning Disabilities: Diagnosis and Remediation. Urbana: University of Illinois Press, 1973.

Based on Kirk's ITPA Test. Discusses his clinical learning model and diagnosis and remediation based on the results of the ITPA.

McCarthy, James J. and Joan F. McCarthy. Learning Disabilities. Boston: Allyn and Bacon, 1969.

A general historical and current overview of the field of learning disabilities.

Miner, Richard. Interpretation of Reading Materials In The Social Studies. New York: Cambridge Book Co., 1973.

Myklebust, Helmer R. and Doris J. Johnson. Learning Disabilities: Educational Principles and Practices. New York: Grune and Stratton, 1967.

A classic in the field of learning disabilities. Written in very technical terms but nevertheless filled with many practical methods for disorders in reading, writing, and math.

Pope, Lillie. Guidelines to Teaching Remedial Reading to the Disadvantaged. Brooklyn: Book-lab, Inc., 1967.

A practical handbook for teachers. Very helpful for those setting up a reading program for the first time.

Smith, Robert M. Teacher Diagnosis of Educational Difficulties. Columbus: Charles E. Merrill Publishing Co., 1969.

A very practical guide for diagnosing learning problems in reading, spelling, writing, and math. Emphasis of the book is on using the diagnostic results to better meet the needs of the student.